DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-011325
Date Inspected: 16-Dec-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspectors: Mr. Liu Fu Wen, Mr. Zhu Tian Shu

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG BAY 1

This QA Inspector observed ZPMC welder Mr. Li Ming Qian stencil 054460, using flux cored welding procedure WPS-B-T-2132-3 (2F) to make OBG cross beam CB15 weld FB202G-042. This QA Inspector observed a welding current of approximately 290 amps 31.0 volts and Mr. Li Ming Qian appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Yong Hai stencil 215397, using flux cored welding procedure WPS-B-T-2232-TCU4b-F to make OBG cross beam CB15 weld FB205-048. This QA Inspector observed a welding current of approximately 205 amps 24.0 volts and Mr. Liu Yong Hai appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG BAY 5

This QA Inspector observed ZPMC welder Mr. Pan Ben Yung, stencil 067601, is using flux cored welding procedure WPS-B-T-2232-TC-U5-F to make traveler rail weld 11TR1-004-014. This QA Inspector observed a welding current of approximately 310 amps 31.5 volts and Mr. Pan Ben Yung appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Si Gao Feng, stencil 204342, is using flux cored welding procedure WPS-B-T-2232-TC-U5-F to make traveler rail weld 11TR1-004-014. This QA Inspector observed a welding current of approximately 305 amps 30.1 volts and Mr. Si Gao Feng is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Ban Qiuyun, stencil 250353 is using flux cored welding procedure WPS-B-T-2232-TC-U5-F to make traveler rail weld 11TR6-001-010. Prior to commencement of welding this QA Inspector observed ZPMC using a torch to preheat the base material where this weld was to be deposited. This QA Inspector observed a welding current of approximately 300 amps 31.6 volts and Ms. Ban Qiuyun appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Jai Jun, stencil 205390 is using flux cored welding procedure WPS-B-T-2231-B-U2-F to make traveler rail weld 11TR10-002-003. Prior to commencement of welding this QA Inspector observed ZPMC using a torch to preheat the base material where this weld was to be deposited. This QA Inspector observed a welding current of approximately 300 amps 31.6 volts and Mr. Chen Jai Jun appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed Ms. Song Aiying, stencil 215689 is using flux cored welding procedure WPS-345-FCAW-3G(3F)-Repair to add weld material to extend the length of cantilever beam BK1A-BKX2D /Panel point 107 in accordance with critical weld repair B-CWR948. This QA Inspector observed a welding current of approximately 220 amps and 22.5 volts and ZPMC QC Inspector Mr. Wang Liang is monitoring this welding. This QA Inspector used a 230 degree Celsius temperature indicating crayon on the base material on the opposite side of the plate where this welding had just been completed and the temperature indicating crayon melted, which indicates the base material is above 230 degrees Celsius. This QA Inspector asked Mr. Wang Liang if he is monitoring the maximum interpass temperature and he did not appear to have any equipment available to determine the interpass temperature. Mr. Wang Liang walked half way down toward the other end of bay #5 where he obtained a laser temperature indicating device, which he used to verify the temperature was in excess of 230 degrees Celsius. Mr. Wang Liang indicated he needed to return the laser temperature indicating device to other ZPMC QC personnel prior to completion of this welding. This QA Inspector requested that Mr. Wang Liang ask CWI Mr. Liu Fu Won to come to the location where this welding was taking place and once Mr. Liu Fu Won arrived, this QA Inspector informed him that Mr. Wang Liang did not appear to have a method of monitoring the interpass temperature. Mr. Liu Fu Won informed this QA Inspector that he will ensure that Mr. Wang Liang has a 230 degree Celsius degree temperature indicating crayon. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

OBG BAY 14

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

This QA Inspector observed ZPMC welder Ms. Li Jiao, stencil 049861 has recently used shielded metal arc welding procedure specification WPS-B-P-2211-B-U2-FCM to make OBG segment 11DE tack weld SEG077X-001 between side plate SP511A and SP349A. This QA Inspector observed Ms. Li Jiao appears to be certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is hot to the touch and it appears that the base material had been preheated with a torch prior to making the tack welds. Items observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer